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(54) Title: INTERGRATED CHEMICAL PROCESSES FOR INDUSTRIAL UTILIZATION OF SEED OILS

(57) Abstract: Integrated processes of preparing industrial chemicals starting from seed oil feedstock compositions containing one or more unsaturated fatty acids or unsaturated fatty acid esters, which are essentially free of metathesis catalyst poisons, particularly hydroperoxides; metathesis of the feedstock composition with a lower olefin, such as ethylene, to form a reduced chain olefin, preferably, a reduced chain α-olefin, and a reduced chain unsaturated acid or ester, preferably, a reduced chain α,ω-unsaturated acid or ester. The reduced chain unsaturated acid or ester may be (trans)esterified to form a polyester polyolefin, which may be epoxidized to form a polyester polyepoxide. The reduced chain unsaturated acid or ester may be hydroformylated with reduction to produce an α,ω-hydroxy acid or α,ω-hydroxy ester, which may be (trans)esterified with a polyol to form an α,ωpolyester polyol. Alternatively, the reduced chain unsaturated acid or ester may be hydroformylated with reductive amination to produce an α,ω-amino acid or α,ω-amino ester, which may be (trans)esterified to form an α,ω-polyester polyamine.